

WHICKHAM URBAN DISTRICT COUNCIL.

REPORT

OF THE


MEDICAL OFFICER OF HEALTH.

FOR THE

YEAR ENDING DECEMBER 1908.

SWALWELL.

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REPORT.

WHICKHAM,

JANUARY, 1909.

MR. CHAIRMAN AND GENTLEMEN,

I beg to submit my Annual Report for the year 1908.

The official estimate of the population for the whole of the Whickham Urban District at mid year 1908 is 16,195. This is probably an underestimate to the extent of nearly 2000, though, as we get further away from the last census, it becomes increasingly difficult to estimate the population with an approach to exactitude.

About the time of the last census, and for some years subsequently, there was a rapid increase of population throughout the whole district. While this increase continues at Dunston, it has almost ceased at Whickham, Swalwell, & Marley Hill, during the last two years.

As on former occasions, I will present the statistics as based on the official estimate for the reasons assigned in previous reports, as concerning the whole district. Afterwards, in comparing the different wards, I will give in tabular form the principal rates for these as based on what we believe to be the actual population of each.

In the meantime when considering the statistics for the whole district, I will only beg of you to bear in mind that we believe they are based on a considerable underestimate of the population, just as the County Medical Officer of Health believes that the population of the Whole County is officially underestimated.

In that case, the mortality statistics both for the Whickham Urban District and the County will appear less favourable than they really are, while as compared with one another, there will be a greater approach to accuracy.

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BIRTHS:—There were 580 births registered. This is an increase of 10 over last year. Of these, 562 were legitimate, and 18 illegitimate, 270 were males, and 310 females.

In the different districts the numbers were:—Whickham 83 — an increase over last year of 13,—Swalwell 150, a decrease of 14,—Marley Hill 50,—an increase of 7, and Dunston 297,—an increase of 4.

The birth rate is 35·8—a decrease from last year of 0·5, and 1·8 less than the average of the last ten years.

It is 1·2 less than the County rate at 37·0, and 0·5 higher than the average County rate for the past ten years, and 9·3 higher than the whole of England and Wales at 26·5.

DEATHS:—The number of deaths registered in the district was 224, which is 40 less than last year. In addition there were 14 deaths of residents in Public Institutions outside the district, viz:—11 in Gateshead Workhouse, 2 in the County Asylum, and 1 in the Conjoint Isolation Hospital at Norman's Riding.

The total deaths of residents thus within and without the district were 238, a decrease from last year of 38. Of these total deaths, 125 were males, and 113 females. Belonging to the different wards, the numbers were:—Whickham 35, a decrease of 3, Swalwell 59, a decrease of 41, Marley Hill 19, a decrease of 5 and Dunston 125, an increase of 11.

The death rate is 13·83 within the district, and 14·69, when the deaths of residents in Public Institutions outside the district are included. This is in the former case 3·0, and in the latter 2·90 less than last year, and 4·4 and 4·1 less than the average of the last ten years. It is 2·9 below the County rate for the year, and 3·4 less than the average County rate for the past ten years. It is almost exactly the same as the rate for England and Wales at 14·7.

This is a much better record than last year, and is, with the exception of 1905, the lowest death rate ever recorded for the district. All the wards show a very satisfactory decrease except Dunston, but Dunston was very satisfactory last year, and the population there has been steadily increasing, altogether out of pro-

portion to the other wards. The great improvement at Swalwell is most worthy of notice as it was the excessive number of deaths there, during the first half of last year which so much raised the death rate for the whole district. It is further significant that the period of about two years during which the deaths at Swalwell were excessive was just that period when Swalwell was especially overcrowded by workmen and their families engaged in the railway widening,

Since that work came to an end about the middle of last year, and since we have consequently only had the normal population, Swalwell has ceased to give anything like the excessive number of deaths. I think it is exceedingly likely that we considerably underestimated the temporary increase of population during that period. It is at any rate very gratifying to note the great improvement this year. It is certainly not wholly due to the fact that there was a serious epidemic of Measles last year, and none this.

Both Whooping Cough and Diarrhœa were prevalent during the year, and we might have expected a greater number of fatalities from these, especially as the season was one especially favourable to the prevalence of summer & autumn Diarrhœa.

Altogether the general vital statistics are very satisfactory, they were particularly so until the last quarter when Chest diseases became very prevalent and fatal and especially increased infantile mortality.

INFANTILE MORTALITY:—The deaths under one year numbered 74,—a decrease of 5 from last year. Almost one half of these occurred during the last quarter. They were distributed as follows:—Whickham 7, Swalwell 14, Marley Hill 5, and Dunston 48.

This gives an infantile mortality rate of 127 per 1000 per annum. This is 11 lower than last year, and is only 6 higher than in 1905, when there was the lowest ever recorded in the district. It is 40 lower than the average of the last ten years, 24 lower than the County for the year and 35 less than the Average County rate for the last ten years, and 6 higher than the rate for England & Wales at 121.

For the different Wards the rates are:— Whickham 84, Swalwell 93, Marley Hill 100, and Dunston 161.

For Whickham, Swalwell, and Marley Hill the rates are particularly good, Dunston alone is excessive.

Inasmuch as the year was one particularly favourable to the prevalence of Diarrhœa, and as this extended all through the Autumn quite up to November, and as the prevalence of this disease is one of the most important causes of infantile mortality, we may specially congratulate ourselves on such a comparatively low infantile mortality for the whole district.

The immediate cause of all the deaths is set forth in Table V. appended to this report and a comparison of this with the similar Tables in the past three reports is very interesting.

The most usually varying factor is Diarrhœa, and this is always proportional to the condition of the Summer and Autumn as regards warmth and dryness. A prolonged period of warm dry weather always increases this disease. This year there were 15 infantile deaths from this disease as against none last year and 19 the year before.

Of the other infective diseases, Measles was but little prevalent, and caused only one death at Dunston, while last year it was thoroughly epidemic, and caused 8 infantile deaths. Whooping Cough was much more prevalent, and yet caused precisely the same number of infantile deaths as in each of the two preceding years viz:- 5.

None of the other Common Infectious Diseases caused any infantile deaths at all.

On the other hand, Bronchitis, Broncho-pneumonia, and Pneumonia were exceptionally fatal especially at Dunston, and mostly during the last quarter.

They caused 15 infantile deaths as against 9 in each of the preceding years.

The most conspicuous decline is in that group of diseases classified in the Table as wasting diseases. These were 19 as against 44 last year, and 43 the previous year. Premature births fell to 11.

Congenital defects were none existent, and deaths due to Atrophy, Debility, and Marasmus fell to 8 from 13 last year, and 19 the year before.

The last is one of the most important facts, as suggesting a great improvement in the general health, and above all, an increased care in the feeding and general management of infancy.

In former reports I have urged the necessity of something being done to inculcate sounder views of the general management and especially feeding of children amongst the mass of the population, and suggested the need of health missionaries or lady health visitors, showing the kind of work that they could accomplish.

The Notification of Births Act, which is an adoptive Act, has since been passed.

At the beginning of the year the Council showed itself greatly inclined to adopt the Act, and asked my opinion.

I expressed the opinion that the object of the Act was good, and that if well administered, it was capable of doing good work, but that it was most unjust, and even insulting to the medical profession generally. To make the profession responsible under severe penalties for unpaid work in the public interest is surely unjust, and to try to compel doctors to disclose professional confidences is insulting as well as unjust.

No law can supersede moral obligations, and when this Act is adopted, a true man and a true doctor must under special circumstances simply ignore the Act at all hazard to himself. Such circumstances are however very rare, and the general effect of the Act will probably be so good, that after the expression of opinion in previous reports in favour of some such action being taken, I felt that I could not do otherwise than advise its adoption in spite of this serious blemish.

At the same time I expressed the opinion that an equal benefit would be conferred if district nurses could be secured for the whole district, and as the Chairman of the Council had already expressed to me his desire that such should be secured, I suggested the incorporation of the two schemes fully recognising that the provision of such

nurses was outside the sphere of the Council but must be arranged on a voluntary basis and financed by voluntary subscriptions.

If under these conditions a Nursing Association could be formed and sufficient subscriptions could be got to provide enough nurses to be located in the different districts without full employment as such, then if after adopting the Act the Council would appoint the nurses as their lady health visitors for their respective districts a double benefit would be gained.

I further expressed the opinion that if the Council would take the initiative in advocating the scheme I was sure that it could be successfully accomplished.

Such action was taken; at a representative meeting called by the Chairman a Nursing Association was formed. Many meetings of advocacy were held in all the districts, the response was admirable, in a short time finances were secured and before the year was out three district nurses were appointed and are now doing admirable work.

In the meantime the Council formally adopted the Act. Notice of this along with an explanation of the method proposed for its working was sent to the Local Government Board. It met with their approval. The fact of the adoption was duly advertised and the Local Government Board have now fixed the date of February 15th, 1909, as that on which it is to take effect.

So that after that date we will have lady health visitors acting throughout the district giving to all mothers every aid that knowledge and training can give towards the management of infancy, for these health visitors are all thoroughly trained nurses familiar with the management of children, and who have already during the past few months abundantly proved their efficiency.

As nurses they are under the authority of the Nursing Association, but as health visitors they are pledged to give one-third of their time to this work under the sole authority of the Council, and under my supervision as Medical Officer of Health. As there are three for the District each will have her area so limited as to be

most conducive to efficiency.

I have already satisfied myself of the capability of those now appointed, and I need not in this report state any instructions which it will be my duty to give them in performing their work as health visitors in connection with the Act. These will be better given individually and directly.

I do not anticipate anything but the most harmonious working throughout, and I feel sure that they will soon be regarded as a great boon and that their services will be generally gladly accepted and I hope acted upon. The results the future alone can disclose.

It is curious to note that during the year the deaths of illegitimate children to births was much less than those of legitimate, the figures being for legitimate 128, and for illegitimate 111. Out of 18 illegitimate births there were only 2 deaths.

ZYMOTIC DISEASES:— There were 32 deaths from Zymotic diseases, limiting this as is customary to the seven chief Zymotic diseases.

This is 10 less than last year and gives a Zymotic death rate of 1·97, which is 0·89 lower than last year. It is 0·73 lower than the County and 0·26 lower than the average County rate, but 0·68 higher than that for England and Wales at 1·29.

The deaths per ages and districts are given in the following Table.

DEATHS FROM ZYMOTIC DISEASES.

	Under 1 year	1 to 5 years	5 to 15 years	15 to 25 years	25 to 60 years	Over 60 years	Whickham	Swalwell	Marley Hill	Dunston	Total
Smallpox											nil.
Measles	1									1	1
Scarlet Fever ... ..		...	...	...	...	...	...	...	...	...	nil.
Whooping Cough	5	7	...	...	...	...	2	6	1	3	12
Diphtheria (including Membranous Croup)	...	2	...	...	...	...	...	...	...	2	2
Fever Typhoid ... ..	...	...	...	...	1	...	...	1	...	...	1
Diarrhœa (including Enteritis)	...	...	...	...	...	...	...	...	...	...	...
	15	1	...	...	...	...	1	3	2	10	16
Totals	21	10	0	0	1	0	3	10	3	16	32

This table again shows how fatal these diseases are to the period of infancy, 31 (that is all but one) being under 5 years and 21 under 1 year.

Diarrhoea is responsible for 16, exactly one half, and Whooping Cough for 12, while the deaths from the more dreaded diseases are comparatively insignificant.

PHTHISIS PULMONALIS.—There were 19 deaths from this cause, of which 2 occurred in the Union Workhouse. This is 3 less than last year and gives a Phthisis death rate of 1·17 which is 0·23 less than last year, but still 0·22 higher than the County and 0·06 higher than the average County rate.

The following Table shows ages and Districts.

DEATHS FROM TUBERCULAR PHTHISIS.

Under 1 year.	1 to 5 years.	5 to 15 years.	15 to 25 years.	25 to 60 years.	Above 60 years.	Whickham.	Swalwell.	Marley Hill.	Dunston.	Total
		1	2	14	2	4	2	1	12	19

From other Tubercular Diseases there were 11 deaths, being one less than last year. This is equal to a death rate of 0·67, which is less by 0·09 than last year and less than the County at 0·70 and the County average at 0·86.

The following Table shows the deaths from all Tubercular Diseases including Phthisis.

DEATHS FROM ALL TUBERCULAR DISEASES.

Under 1 year.	1 to 5 years.	5 to 15 years.	15 to 25 years.	25 to 60 years.	above 60 years.	Whickham	Swalwell.	Marley Hill	Dunston	Total
3	6	3	2	14	2	5	7	1	17	30

This gives a death rate from all Tubercular diseases of 1·85 which is 0·31 lower than last year. It is slightly higher than the County at 1·65, but lower than the County average at 1·97. It shows that 12·6 per cent of all deaths in the district were due to Tubercular disease.

There is no notification, either compulsory or voluntary, of cases of Phthisis or other tubercular diseases. Houses are sometimes disinfected after deaths from Phthisis, though the practice is not general, but in most cases a thorough cleansing is recommended after deaths from Phthisis.

ACUTE RESPIRATORY DISEASES.—There were 47 deaths from these which is 2 less than last year.

This gives a death rate of 2·90, which is 0·22 less than last year but still much above the year before. It is slightly higher than the County at 2·81 but lower than the County average at 3·06.

The following Table shows ages and districts.

DEATHS FROM ACUTE RESPIRATORY DISEASES.

	Under 1 year.	1 to 5 years.	5 to 15 years.	15 to 25 years.	25 to 60 years.	Above 60 years.	Whickham.	Swalwell.	Marley Hill.	Dunston.	Total.
Bronchitis & Broncho-Pneumonia.	13	4		1	6	7	8	5	1	17	31
Pneumonia-Pleurisy.	2	1		1	7			2	1	8	11
Others	1				2	2	1	3		1	5
Total—	16	5		2	15	9	9	10	2	26	47

These diseases were specially prevalent and fatal during the last quarter, especially in young children and old people. Dunston suffered most.

There were 2 deaths from PUERPERAL FEVER, one each at Whickham and Swalwell, and from other diseases and accidents of

Parturition there were 7 deaths, which is a most unusually large number. Two of these were at Swalwell and 5 at Dunston.

There were no other deaths from Septic diseases and only one death directly attributable to Alcohol.

The deaths from CANCER fell from 12 last year to 8 this, of these one was at Whickham, 1 at Swalwell, and 6 were at Dunston.

HEART DISEASE was the cause of 18 deaths as against 19 last year, mostly in advanced life. Three were at Whickham, 6 at Swalwell, 3 at Marley Hill and 6 at Dunston.

ACCIDENTS -There were 7 fatal accidents as against 3 last year. Three were at Whickham, 1 at Swalwell. and 3 at Dunston. The latter three were cases in which the verdict at the inquest was "found drowned".

In accordance with the precedent of the last three years I will now give the most important statistics for the whole district and its component parts as based on what we believe to be the actual population.

This population has been estimated for the past few years with the utmost care by the Registrar, Mr. Jobling, with whom I have considered the subject very carefully.

In Whickham, Swalwell, and Marley Hill, there has been little development during the past two or three years and the natural increase of births over deaths is rendered very uncertain by the fact that there is a considerable amount of the floating element. There has been some increase in houses at Whickham on the Whaggs estate, and six new houses have been built and occupied to the north of Rectory Cottages. Building at Swalwell has practically ceased and at Marley Hill, new houses have but little exceeded those which have been taken down and rebuilt in fewer numbers but of larger size.

Dunston has increased considerably and is still increasing but there are many empty houses and our aim is not so much to give the population at the present moment as the average population during the year, or as it would be at mid-year.

It appears that we have hitherto underestimated the number of houses in the Marley Hill area but not the population which we know with considerable accuracy.

For various reasons we believe that in spite of the new houses which have been built at Whickham, the population has remained stationary.

After the most careful consideration, the following is the estimate which we have formed of the population at mid year 1908.

ESTIMATED POPULATION.

	Inhabited Houses.	Population.
Whickham ...	645	3530
Swalwell ...	851	4260
Marley Hill ...	406	2000
Dunston ...	1763	8013
Total	3665	17803

The following Table then gives the important statistics on this estimate including residents and non-residents.

	Whickham.	Swalwell.	Marley Hill	Dunston.	W'leDist'ct
Birth rate	23·51	35·21	25·0	37·06	32·57
Death rate	9·91	13·84	9·5	15·59	13·36
Infantile Mortality	84	93	100	161	127
Zymotic	0·84	2·34	1·5	1·99	1·79
Phthisis	1·13	0·46	0·5	1·49	1·06
All Tubercular	1·41	1·64	0·5	2·12	1·68
Respiratory (other than Phthisis)	2·54	2·34	1·0	3·24	2·64
Cancer	0·28	0·23	nil	0·74	0·44
Heart Disease	0·84	1·4	1·5	0·74	1·01

In comparing this Table with those of the previous years some important facts are brought out.

The birth rates at Whickham and Marley Hill have gone up, though they still remain much lower than the other districts. I have in previous reports given reasons for the low birth rate in these wards. If more houses were built in these districts, I have no doubt the rate would rise especially in the Marley Hill district for at present most of the young married people who properly belong to Marley Hill have to find houses just outside our area in Sunnyside, Streetgate and Burnopfield, where houses are constantly being built.

As regards Sunnyside especially, a medical friend of mine who does much work in that district put the case very tersely when he described Sunnyside as "like a maternity hospital for Marley Hill.

Many of these people seize the first opportunity to return to Marley Hill when houses become vacant, so that there are often more babies in that district than are actually born there, and hence, other things being equal, there must be a tendency to a higher infantile mortality. The reason for this is, that most of the houses (all at Sunnyside & Streetgate) are rented houses, and where possible most prefer the "free houses".

The rate at Swalwell has markedly decreased, and it has done so at Dunston very slightly. For the whole district it is precisely the same as last year.

The death rate is very satisfactory throughout. As compared with last year it shows a decline everywhere except at Dunston where it is by no means excessive.

It is remarkably low at both Whickham and Marley Hill, and though the birth rate is higher, Marley Hill is actually lower than Whickham. Compared with last year, Swalwell is particularly good especially as the birth rate there though so much lower than last year, is still high. Dunston alone though still fairly satisfactory is the least so, while the whole district is very satisfactory as compared with former years.

The most important point in this general satisfactory decline is undoubtedly the greatly lowered infantile mortality in every district except Dunston.

I feel confident that a great factor in this decline has been the interest excited by the agitation in favour of the establishment of district nurses now happily crowned with success, such nurses to act also as lady health visitors. The holding of many public meetings for discussion, the talks outside etc., have markedly created a new public opinion in favour of greater care of babies from birth onwards, and this has to my own notice, greatly increased breast feeding. It is significant in this connection that only in the districts where the subject was taken up with enthusiasm by the mass of the people has the great decline in infantile mortality occurred. Dunston was never aroused to the same extent and there the mortality has continued high. I venture to hope that this will be altered by the exertions and influence of the newly appointed health visitors

acting also as nurses. I have every confidence that they will be well received, and that their advice generally will be taken.

The Phthisis and all tubercular rates on the whole show improvement. As usual Marley Hill is especially favourable having had only one death from Phthisis and none from any other tubercular disease, Swalwell also was very satisfactory. Again as usual Whickham was not so good as we think it ought to be considering its constantly favourable mortality statistics in other ways, still it is below the County for the whole group of tubercular diseases. Dunston alone is considerably above the County.

The only case in which Marley Hill heads the list, is in deaths from Heart disease, but this occurs generally in advanced life, and I have shown formerly that there is generally a proportionally larger number of old people at Marley Hill.

Notifications.

There were 99 notifications of infectious diseases which is 37 more than last year. Of these 40 were cases of Scarlet fever, 44 of Diphtheria, 2 of Enteric fever, 11 of Erysipelas, and 2 of Puerperal fever.

Fifteen were at Whickham, 15 at Swalwell, 28 at Marley Hill, and 41 at Dunston.

Both Enteric, 14 Scarlet fever, and 9 Diphtheria cases were removed to Hospital where all recovered except one case of Enteric.

It will be noted that every district shows an increase except Marley Hill, which has however still the largest number of all proportional to population, and, as in the last two years, this was largely due to the prevalence of Diphtheria. Again proportional to population, Swalwell has the smallest number, though considerably more than for some years past.

There were 5 deaths viz:- one of Enteric fever in Hospital, 2 of Diphtheria, and two of Puerperal fever.

It is worthy of note that no notification of a child under one year was received.

SMALL POX was entirely absent during the year.

This district has hitherto been one of the most thoroughly vaccinated in the country. The increased facilities now given for ex-

exemptions are modifying this. The accumulation of these exemptions during a number of years must inevitably, in my opinion, prepare the way for a serious epidemic of Small pox in the not very distant future.

SCARLET FEVER:—There were 40 cases being 11 more than last year, and 2 than the year before. Ten were at Whickham, 5 at Swalwell, 5 at Marley Hill and 20 at Dunston.

The type was generally mild, and no fatalities occurred. Fourteen were removed to Hospital.

The cases were widely separated in time and place, March and October were the only months in which no cases occurred. It was but rarely that direct infection could be traced and at no time was the disease seriously epidemic. The nearest approach to this was at Dunston in May and June, when 9 cases were notified. These were however extremely mild and as Røtheln was also prevalent at the time, there was considerable doubt as to the certainty of the diagnosis in several of the cases. Only those about which there could be no doubt were sent to Hospital. The Swalwell cases had no possible connection with one another though a common source for 4 was probable, three were sent to Hospital and the others were effectually isolated at home. Neither any direct connection nor a common origin was probable or even possible for the Marley Hill cases and though none were sent to Hospital in no case did another arise from any of them.

The Whickham cases were peculiar and were the most interesting and instructive. The first occurred in February at the Whaggs, of undiscoverable origin, it was isolated at home and, though there was a large family and no special nursing, no other cases occurred. The next occurred in June, almost certainly due to infection casually got at the "Hopping". It was sent to Hospital and no other cases occurred until September when another case occurred in Library Place, almost certainly contracted by a visit to a Hospital in Newcastle. This was removed to Hospital and no other cases occurred until its return home, when a sister and a cousin promptly developed the disease and were sent to Hospital

Again no others occurred until their return home, when two others, the only remaining children in the two families, developed the disease as well as another child who had had close association with them. They were all removed to Hospital and no further cases occurred except one woman who developed a severe attack five days after her confinement, but this case had no possible connection with the others. She was isolated at home and even her baby escaped. We had therefore 5 "return" cases and none of the children in the two families specially concerned were saved from the disease by the removal to Hospital of the first case.

I wish to make it perfectly clear that in stating these facts I make no reflection on the management of the hospital because I am quite aware of the fact that similar occurrences—similar return cases—take place in connection with most, if not all, infectious disease hospitals where Scarlet Fever is concerned. From our present knowledge of the disease I think we may safely say that such occurrences are inevitable. In the cases under discussion I most carefully examined the children myself immediately after their return from hospital and was perfectly satisfied that they were completely recovered and that the peeling stage was over, and I had no reason to doubt, nor did I doubt, that every effort had been made to disinfect both patients and their clothing. In only one was there any discharge—a discharge from the ear—but it so happened that this case could be dismissed as a factor in the causation of the others. It is also certain that a too early discharge from hospital is not the cause of the "return" cases because where in the laudable desire to prevent such cases some hospital authorities have prolonged, even doubled, the period of detention the results have not been any better, on the whole, and this is an important consideration, they have been worse.

On the other hand I have long held the opinion as the result of personal experience in the management of Scarlet fever in private practice that home isolation is not a difficult matter in connection with Scarlet Fever where house accommodation is reasonable and where the mother is intelligent and painstaking, and I may add

where the doctor in attendance is earnest and can impress this earnestness on his patients.

I taught this belief to nursing classes which I conducted as far back as 1894, urging attention to only a few points, chiefly confinement to one room, the use of rags to be immediately burnt in place of handkerchiefs, and as soon as the temperature fell to normal, usually at the end of the first week, a daily disinfecting bath and inunction with a disinfecting oil.

I can give no better proof of the strength of this conviction than the fact that on the two occasions when Scarlet Fever occurred in my own family, my wife on my advice nursed the children without any assistance, and at the same time conducted her household and attended to all the other children precisely as usual and none of them became infected, precisely as I expected.

I cannot recall a single exception out of a very large number of cases where these conditions, existed viz:— isolation in one room, a reasonably intelligent and painstaking mother or other attendant. In a still larger number of cases where the first condition was absent and where the patient had to be treated in a room occupied by other children, in many cases even in back to back houses I have got equally good results, failing only when the mother could not be induced to take the necessary trouble.

I can only recall one case in all my experience where the conditions of intelligence and painstaking efforts of the mother were present, in which this connection was at fault, and at the time I regarded this as just an example where the exception proves the rule. It was in a back to back house, and the patient was treated in the common room of the family, and following my rule in those days the patient was allowed to associate with the others at the end of the month. Other children in the family then got the disease, but in such degree that it could scarcely be detected. The impression was conveyed that the infection had been attenuated, but not destroyed. At that time and during all the time that my conviction was being formed it is to be stated that the type of Scarlet fever was very different to what it has been in recent years. In those

days it was a most serious disease, and such mild cases as those just above mentioned were most exceptional.

We had no isolation hospital in those days, and were perforce compelled to treat at home no matter how unsatisfactory were the surroundings, and yet that was my experience, when these simple rules were followed the disease did not spread, where they were ignored it did, and yet I am not sure if we actually got more cases than we do now.

As an inducement to the perfect carrying out of these simple instructions, I urged that we could safely allow the patients to associate with others as usual, on an average, at the end of a month instead of the minimum of the hospital six weeks even if the peeling stage was not completed, and as a practical result with the above mentioned exception I never knew any harm result.

I would therefore finally express my firm opinion on which as your Medical Officer I wish to act, in Scarlet fever cases, 1st, where home isolation is possible and when the parents do not desire hospital treatment, and when they are intelligent and willing to take the necessary pains, I do not wish to urge removal to hospital. Under these conditions on the average, I believe home treatment is better for the patient and better for the public health. 2nd, Whenever complete home isolation is not possible, when parents are not prepared to take the great pains I have indicated, or when willing, they have not the time from their other duties to do so, and when it is important that the other children in the family should continuously attend school, then I urge immediate removal to hospital.

I believe that in your hospital they receive the utmost attention both medical and general. I have abundant evidence that they have a good and happy time, and that they are thoroughly well treated in every way.

In the meantime the other children left at home can go to school as usual immediately after the patient has been removed and the house disinfected as it always is at the earliest possible moment.

At the same time I urge you not to expect too much from hos-

pital isolation, return cases will occur from time to time, they seem to be inevitable and though of course it is only your duty to enquire into such cases and to satisfy yourselves that all precautions are taken I further urge you not off hand to blame the management of the hospital.

The case of Scarlet fever in a puerperal woman is also very interesting as a positive fact in an old standing medical controversy. At first I certainly was alarmed at the severity of the febrile attack but next day a definite Scarlet fever, not a septic rash developed and the further progress of the case showed a fairly severe but definite and uncomplicated attack of Scarlet fever without any puerperal symptoms whatever. The Scarlet fever infection bred true. It was pure Scarlet fever and not puerperal fever and recovery was complete.

DIPHTHERIA INCLUDING MEMBRANOUS CROUP:—There were 44 cases being 21 more than last year and more than in any year of which I have a record. Three were at Whickham, 4 at Swalwell, 20 at Marley Hill, and 17 at Dunston.

There were 2 deaths which gives a case mortality of only 4·54 per cent very much lower than last year and a death rate of 0·12 which is also considerably less than last year and less than the County and the County average.

Both deaths occurred at Dunston, one was a case of the laryngeal or membranous croup type seen too late for effectual antitoxin treatment. In these cases immediate tracheotomy plus antitoxin is the only treatment which offers a chance of success. It is never too late to give this chance so long as the child is alive but it is much better not to defer the operation too long.

The other case was a purely toxæmic one and was not seen by the doctor notifying until too late. It however was a valuable lesson in proving that when antitoxin is not given early the disease can rapidly develop the same malignant symptoms as we were accustomed to in the pre-antitoxin days. We seldom see such malignant symptoms now not because of any change in the type

of the disease, but because we prevent them occurring by the early use of antitoxin, and it also showed that the effect of antitoxin is not great after the fifth day, though I am far from thinking that even then it is always useless. If the patient is not already fatally poisoned, it may, and as a fact it often does save life, though convalescence will be necessarily prolonged, and paralytic symptoms may be increasingly expected.

Nine were removed to Hospital and were mostly convalescent through the immediate use of antitoxin before admission. The difficulty in getting more cases sent to hospital has been due to the fact that such great care has generally been taken, by the doctors notifying, to be certain of the diagnosis, while antitoxin has generally been promptly given so that convalescence has been established before they could be sent and the parents have been reluctant to allow their children to go when they were recovering so well.

In view of the greater incidence of the disease I hope to be able to induce more to go to hospital, to try if in that way we may not diminish the prevalence.

I have so recently written at length on the subject of Diphtheria and have sent a copy of my address to all the members of the Council that there is no need to say much more in this report, but some practical points still require enforcement.

The cases of the year have certainly not shown any considerable effect of defective sanitation, the only cause that can account for the cases has been direct or indirect infection through "carriers".

The opportunity or the privilege given by the County Council to all doctors to have their cases confirmed by bacteriological examination at the College of Medicine is most valuable, and I am glad to say that in this district it is being more and more taken advantage of, though it may even now be extended.

Now that this custom of getting bacteriological confirmation of the diagnosis is becoming general, it would be a further gain if the custom also became general to have bacteriological examinations during convalescence so that no persons who have been suffering from

Diphtheria should have freedom to mix with the community until such examination has shown them to be free from infection.

The general practitioner has the privilege of doing this at the expense of the County Council, but it is perhaps too much to expect of him seeing that this is done not for the benefit of his patients but solely in the interest of the public health and it would be regarded as an interference with his patients if the Medical Officer of Health intervened and did the work which I do not think he has any right to do.

The simplest solution is to do everything possible to induce all patients suffering from Diphtheria to go to hospital and to remain there until swabs taken from their throats are proved negative. These swabs must be carefully taken and there is an art in taking them. One must be sure that the swab is thoroughly taken, by being well pressed into the crypts of the tonsils where the bacilli lurk. At least two consecutive swabs at an interval of a few days should be proved negative before freedom of infection is accepted.

Then the greatest difficulty arises, the privilege given by the County Council is not, I am given to understand, extended to the hospital physician. He must therefore either take the swabs himself, inoculate his own media, incubate them, stain and examine slides microscopically, in which case a well fitted laboratory would require to be added to the hospital, or the hospital authority would require to make arrangements with the College of Medicine similar to those made by the County Council.

Unless one or other of these alternatives is adopted hospital isolation for Diphtheria is in the highest degree absurd. There is no time limit to the disappearance of infection. In most cases the bacilli disappear within three or four weeks but in many they remain for several weeks longer and in exceptional cases even for months. It is simply courting disaster to discharge patients on a time limit.

We cannot avoid it in Scarlet fever for we have no better basis to act on, but we can avoid it in Diphtheria, for we have this certain basis.

I have no authority to advise the Hospital Committee but I have the privilege of advising in these matters the Whickham Council, certain of whose members are on that Committee, and these I would urge to advocate before the hospital committee the importance of adopting either of these alternatives.

I write thus strongly because I have the fullest conviction that Diphtheria can be, and at no very distant date will be altogether stamped out.

I admit the difficulty of contact carriers, but with the early removal of actual cases to hospital which will increasingly result from the guarantee that these are not discharged until they are proved non-infective, contact carriers will become fewer.

If some such scheme as I have advocated in my address could be adopted, I have no doubt that the danger of these would materially diminish and ultimately cease. I am by no means wedded to that scheme, but I am convinced that it is only on these lines that the stamping out process will be effected.

The incidence of the disease in our district is distinctly alarming and no efforts should be considered too great to eradicate it. In the Marley Hill district it has been excessively prevalent for years. With a small population nearly half the cases occurred there last year. Twenty cases in a population of about 2,000 means that one person out of every hundred has had diphtheria during the year.

If it were not for the fact that the people there have become extraordinarily alert, that they have a wholesome dread of the disease and a still more wholesome conviction of the immediate benefit of antitoxin treatment with the result that no deaths have occurred, I am sure there would have been something of a panic. The same incidence throughout the whole district would, I am sure, have raised an outcry for a special enquiry.

Swalwell has hitherto been wonderfully exempt, but the cases are increasing, and one cannot but dread the possibility of its establishment there.

To prevent that, I would urge immediate removal to hospital

of all cases that cannot be effectually isolated at home, and whether at home or in hospital, isolation should be continued until infection is proved to have ceased. We cannot feel satisfied until we have a guarantee that this will be effective in all hospital cases, and it cannot be effective until the utmost facilities are given for bacteriological confirmation.

TYPHOID OR ENTERIC FEVER:—There were two cases notified, one at Swalwell and one at Dunston.

The Dunston case was certainly contracted outside the district when the man was travelling about in search of work. The origin of the other could not be determined. They were both removed to hospital and one died.

The death rate was 0·06, much below the County and County average.

The important and satisfactory point is that though these cases occurred, there was no extension from them.

ERYSIPELAS:—There were 11 cases, 1 at Whickham, 4 at Swalwell, 3 at Marley Hill and 3 at Dunston. They all recovered.

The cases of Erysipelas are the least important of those notified because there is not a generally recognised definite idea as to what constitutes Erysipelas. There is unquestionably a perfectly distinct and definite disease the notification of which is very important, but there are other conditions, various septic infections etc., which are often called by the same name, the notification of which is not of much importance and which, I believe, are not expected to be notified. It is mostly these latter which swell the list, and which nullify the value of the notification of Erysipelas.

NON-NOTIFIABLE INFECTIOUS DISEASES:-

MEASLES:—This was not prevalent during the year as was to be expected after the serious epidemic prevalence last year. At the same time a considerable number of cases occurred at Dunston during the last quarter, and one death occurred. The death rate was thus only 0·06 considerably below the County and County average.

WHOOPING COUGH:—This disease was very prevalent throughout the district, and throughout the year and assumed rather serious epidemic prevalence especially at Swalwell and Whickham during the latter half of the year, almost ceasing towards its close.

It caused 12 deaths all under 5 years of age and 5 under 1 year. Two were at Whickham, 6 at Swalwell, 1 at Marley Hill and 3 at Dunston.

This gives a death rate of 0·74, above the County and County average at 0·53 and 0·34 respectively.

Of all the directly infectious diseases, Whooping Cough is at the present day probably the most fatal.

It is extremely infectious, the infection being almost entirely conveyed from patient [to patient, indirect infection through fomites i.e. clothing etc., plays some part though probably not a very great part in spreading the disease. Practically everyone is susceptible until an attack has been gone through when immunity is acquired generally for life.

It is but rarely that one attains adult life without an attack. In this respect it is comparable to Measles.

It is probable that the recognition of this fact is the reason that so few efforts are made to stop its ravages. A kind of fatalism exists as to its incidence, and yet the fact remains that it is extremely fatal, though very rarely so after the fifth year of life. If only infants and young children could be protected, it would almost cease to be a fatal disease, and surely something more than is done should be attempted to attain this result. A somewhat similar fatalism exists in regard to Measles, but this is becoming mitigated and very earnest efforts are constantly made to defer an epidemic as long as possible because here also it is in infants and young children that nearly all fatalities occur. Every year that an epidemic can be postponed the fewer in the long run will be the fatalities.

From the figures which I have for the five years in which I have annually reported as your Medical Officer of health, I have prepared the following Table.

Deaths from the chief Infectious Diseases for the years 1904 to 1908 both inclusive.

	Small Pox.	scarlet fever,	Diphtheria,	Typhoid fever,	Measles.	Whooping Cough
1904.	1	3	4	0	6	14
1905.	0	0	3	2	1	4
1906.	0	3	2	2	3	9
1907.	0	1	3	0	25	8
1908.	0	0	2	1	1	12
Total	1	7	14	5	36	47

It is thus seen that this but little regarded disease is by far the most fatal of all. The fatality is only approximated by Measles which is almost equally lightly regarded, while the deaths from the other infectious diseases that are regarded with the utmost apprehension are insignificant in comparison.

The deaths from Whooping Cough alone are nearly double those from Smallpox, Scarlet fever, Diphtheria, and Typhoid taken together and when Measles and Whooping Cough are taken together the fatalities from them are more than three times those from the so called most serious diseases.

I suppose if any one suffering from Smallpox, Scarlet fever, Diphtheria, or Typhoid, was found in a public assembly or in a public conveyance, an angry outcry would arise and the patient or, if a child, the patient's parents would be prosecuted and severely punished and yet one is constantly meeting cases of Whooping Cough under similar circumstances, and scarcely anybody takes any notice, and yet it is far more infectious, and as the figures show far more fatal than all these put together. It is perhaps less infectious than Smallpox, but no one need ever get the latter, because by vaccination in the case of children, and re-vaccination in adults immunity can be secured, and people so protected, and such protection is freely offered them, run practically no risk at all. In the case of Typhoid the risk is nil for the disease is not directly infectious in this way. In Diphtheria it exists, but to nothing like the extent that it does in Whooping Cough, and then we have now a remedy which is practically a specific for this disease if applied

early, while for Whooping Cough we have neither a means of producing immunity nor a specific cure, and from year to year it goes on practically unchecked taking annually its heavy toll in infant deaths.

The schools are certainly not blameless in the matter. I believe there is a rule forbidding children suffering from Whooping Cough to attend school but it is constantly and persistently ignored, school board officers force them into school on the supposition that if they do not vomit when they cough they can do no harm. In spite of the utmost efforts and the strongest protests, I have found it impossible to eradicate this opinion. Not being a notifiable disease, the Medical Officer of Health does not get to know more than a fraction of the cases, and the bulk of the cases of older children are not attended by a doctor as these are but seldom very ill, and they are consequently forced into school, propagate the disease, which is in this way carried into homes, infects young children, a considerable proportion of whom die. The deaths are duly registered and everything is considered as just in the order of providence.

Now that such efforts are being made to moderate Infantile Mortality surely we may hope that something more will be done to prevent this unnecessary slaughter of the innocents.

I venture to think that I have made out a case at least for special enquiry. I cannot conceive that any unbiassed person considering these facts, and duly studying that Table, can believe that the present attitude towards Whooping Cough is satisfactory, or that greater efforts should not be made to mitigate its prevalence and fatality.

The logical inference would be to isolate all cases of Whooping Cough for the whole period of its infectiveness which is on the average six weeks.

The difficulty is that there are no isolation hospitals for this disease, and to coop them up in their so frequently overcrowded illventilated homes would be a serious injury to the patients, for it is a fact that after the preliminary catarrhal stage is over they are

generally best treated in the open air. When we further know, which is a fact, that Whooping Cough is often a precursor of tubercle, that is, that from the lowering of the vitality caused by it, the specially injurious effect produced in the lungs causing an increased proneness to tubercular disease, patients are rendered more liable to Phthisis,, compulsory isolation in the average homes would be a distinct injury, and I do not think we are justified in thus injuring, or as in many cases it would be sacrificing the individual patient for the welfare of the public.

I have no scheme to offer. I am content to state the case and to urge a thorough enquiry. I do not believe that it is beyond the wit of man and especially the wit of medical Officers of health and the medical profession to formulate a scheme that will be best for the individual patients and will mitigate the incidence and fatality of this most persistent and fatal disease.

DIARRHŒA:—This disease was not only prevalent this year, but its prevalence continued over an unusually prolonged period, beginning in June and extending into November, due to the prolonged warm dry Autumn. It caused 16 deaths, all in infants, and all but one under one year. The different districts suffered unequally. There was only one death at Whickham, there were 3 at Swalwell, 2 at Marley Hill, and 10 at Dunston. Dunston alone thus gave an excessive mortality, the other districts were really satisfactory considering the character of the season, The incidence was the same. In all the districts except Dunston the number and severity of the cases were inconsiderable in comparison to what they have been in many former years. I have no doubt whatever, that this is explained not only by the improved sanitary conditions, but by the fact already noted that in these districts especially, there was a great increase in the breast feeding of babies largely due to the conversion of public opinion resulting from the meetings and discussion in connection with the creating of a nursing association. Dunston was never influenced to the same extent as the others and enthusiasm was never aroused there.

The death rate was 0·98 which is considerably lower than the

County at 1·44, and only slightly higher than the County average at 0·90, especially as I have included all cases of Enteritis etc., which are usually tabulated separately in the County returns. The doctors practising in this district are alive to the fact that these names only express the same disease in the summer and autumn and consequently they but seldom use the terms, and as a rule only use the names officially recommended.

Though this disease is annually responsible for a tremendous mortality throughout the country, it is entirely a preventable disease. If breast feeding of children could become universal, it would become insignificant as a cause of death, and even where this is impossible, with personal and domestic cleanliness including cleanliness of surroundings which means good sanitary conditions for the provision of which the Councils are responsible, and above all the provision of pure CLEAN milk, and clean storage of milk, the deaths from this cause would decrease to an enormous extent.

We have only to realize the fact and see it vividly, that in the upper and middle classes of Society, this as a factor in mortality is insignificant, to recognise its preventability. I am not sure that these classes breast feed their children in greater proportion than the working and labouring classes, but when it comes to hand feeding they certainly excel them.

As things are at present, I am sure that the only salvation in this respect, as in so many others where children are concerned, is breast feeding of children.

But if the labouring classes could be got to realize this fact, and then determine that what the upper and middle classes can do they also will do, there would be an enormous saving of life.

I can assure them that they could do it if they would only emphatically resolve that their children shall have the same chances of life. The knowledge and opportunities that they now lack are now being freely offered them, and if only they will listen to and act upon the advice and help now offered them by the Council, through their lady health visitors, I am sure the result can be attained.

They need have no diffidence about accepting it, for much of it has only recently been acquired through long labour by doctors themselves, and it is constantly being added to. The health visitors will only be the medium through which the newer knowledge is practically conveyed.

General Sanitation.

SCAVENGING:—This is done efficiently by the Council's own men, under strict supervision throughout the district. Now that ash-pit privies, which until a few years ago were very general, are almost wholly abolished this efficiency has increased.

All ashpits are cleaned out regularly once a week. I think this is of great importance especially in the summer months.

Believing as I do, that flies play an important part in the propagation of both Diarrhœa and Enteric Fever, and that the germs of these diseases are liable to exist and develop in ashpits the importance of this weekly cleansing assumes increased importance, because after general cleanliness in the houses and their surroundings the prevalence of flies to a large extent depends on the period of accumulation of filth in the ashpits.

The developement of flies from the egg to the fully developed fly is just about a week, hence eggs deposited in the recently cleansed ashpit will scarcely reach maturity before everything is again cleared out and so the development of flies is reduced to a minimum.

The weekly cleaning is just on the margin of safety. Shortening this by a day or two in the hottest months would be an advantage. In the hot months the bacteria which cause Diarrhœa are probably always present, but those which cause Enteric fever will only be present if they have got introduced by a patient suffering from the disease.

SLAUGHTER HOUSES are still unregistered, but they are all well known and strictly inspected as regards cleanliness. As it is always possible that some may be overlooked it would be advisable to enforce registration.

COW BYRES are registered and are frequently inspected to ensure their being in accordance with the Act and Bye-laws. They are fairly well kept up to this level, but I do not think that 500 cubic feet of air space, which is the minimum required by our bye-laws, is sufficient to maintain the health of cows. In my opinion it ought to be raised to a minimum of 800 cubic feet. Fortunately, I believe in most cases, there is considerably more than the minimum.

Increased ventilation and lighting are required in many cases.

On the other hand I have never had any complaint as to the quality of milk supplied, and it has never come under suspicion as a factor in the causation of disease, except in the cases of summer Diarrhœa in children, and then want of care and cleanliness in domestic storage are most at fault.

I dealt so fully in my last Report with the relationship between milk and tuberculosis that it is unnecessary to refer to it further.

No efforts should be considered too great to ensure a pure and plentiful milk supply, and the accomplishment of this depends most largely on the maintenance of the most perfect cleanliness from the cows and cow-byres to the milk consumer and its further maintenance in the home of the latter.

All the farmers and cow-keepers have a plentiful supply of water entirely above suspicion.

FACTORIES, WORKSHOPS, &c.—These are all satisfactory. All the large factories are modern, well ventilated, not overcrowded, well drained and the sanitary conveniences are ample.

Apart from the large factories there are 14 workshops on the register. They are mostly small, are not overcrowded, and all conform to the legal requirements.

It was not found necessary to call the attention of the Factory Inspectors to any defects and we received no notice of any sanitary defects from them.

There are not in the district any of the works specially scheduled where home-work is given out, we have consequently no lists of home workers.

There are four small bake-houses, one at Swalwell and 3 at Dunston. All are satisfactory and none are underground.

PUBLIC ELEMENTARY SCHOOLS.—These are precisely as in my last Report, but in Whickham a new County School is being built.

The complaint which I made in my last report about the large Marley Hill County School has been remedied by the extension of the drainage system to take its drainage. The objectionable cess pool with its constant overflow has been abolished.

The action taken to prevent the spread of infectious disease in schools is the same as that taken to prevent the spread generally.

Every effort is made to prevent children suffering from such diseases attending school and with certain reservations from attending from infected houses.

These reservations I explained in my last Report.

As opinions on some of the points differ amongst both general Practitioners and Medical Officers of Health, it will be interesting to note the attitude taken by the Medical Inspectors of Schools on some of the points.

As a rule children from houses where any of the common notifiable infectious diseases exist should be excluded, but if the patient is sent to hospital, they may return after the house has been disinfected. This may be used as a strong inducement to encourage hospital isolation.

In Diphtheria it would be safer in all cases to have swabs proved negative before this permission is granted.

In Measles and Whooping Cough it is only, in my opinion, necessary to exclude children who have not already had the disease.

The action with regard to ringworm is very difficult.

It is obviously very wrong to allow children suffering from this

disease in an infective condition to attend school. Without Xray treatment, most cases take many months of the most careful and persistent treatment before they get well. It is but rarely that Xray treatment is available. Are we then to exclude the children until recovery is complete?

Though this would be the safest course I do not think it is always necessary. After a few weeks thorough treatment all the germs within reach will be destroyed and therefore those likely to infect others, and if the treatment be then systematically carried out the danger to others is probably not great and attendance may be permissible under certain safeguards.

Otherwise in some of the schools an enormous number of attendances will be missed. Again this may be used as an inducement to have the cases systematically attended to. There would be much work here for the school nurses. At present I am quite certain that many children suffering from ringworm in an infective state, are not only allowed to attend, but by the attendance officers are compelled to attend school with the worst results in extending the prevalence of the disease.

HOSPITAL ACCOMODATION.

The conjoint hospital at Normans Riding is available for all the usual infectious diseases, viz:- Scarlet Fever, Diphtheria and Enteric Fever, and has proved amply sufficient for the requirements of our district, though it has sometimes been fairly full. The Small-pox hospital at Sealburns has fortunately not been required but is available if required.

WATER SUPPLY:—This is ample in quantity and excellent in quality. Marley Hill is supplied by the Consett and Weardale, and the rest of the district by the Newcastle & Gateshead Water Companies.

From time to time individual houses are found without a convenient supply, but when discovered, action is taken to secure it.

Some houses at the brickworks, Swalwell, at some considerable distance from the village, are without a supply. Difficulties have

arisen and necessary action has been taken and postponed from time to time, but now there is a prospect of matters being satisfactorily arranged,

DRAINAGE:—The large drainage scheme referred to in previous reports has now been completed and is in full working order, in so far as it includes Whaggs, Cornmoor Road, Millfield Road, Sunnyside, New Houses Marley Hill, and the Valley, Marley Hill.

All connections have been made and the Shone system works perfectly.

It has not yet been extended to include Marley Hill itself, though this extension has been decided upon by the Council.

Though prior to my last report a resolution was also passed to effect the proper drainage of Byermoor, this has not been accomplished, and the drainage there is still by open channels, which have been repaired.

The defective drains at Pit Row, Whickham, complained of in last report have been replaced by effective ones, in conjunction with the complete cementing of the yards and road and a very great improvement has been thus effected.

The old effete system of drainage of back Quality Row and Dark Entry, Swalwell, has also been replaced by modern drainage and the same is true of the far end of the Waterside including Malting Yard. To complete Waterside, Swalwell, it will be necessary to deal with the near half including Poorhouse Yard, in the same way, and this improvement has already been determined on by the Council.

It will require to be done in connection with other improvements for which the winter is not suitable.

The points mentioned as still requiring to be done occupy a small proportion to the whole extent of the Whickham Urban District and even these are not so bad as to be seriously dangerous to the public health so that it is quite correct to say that the district as a whole is efficiently sewered.

THE ANNUAL SURVEY took place again with excellent results. It enabled the officials to point out *in situ* to the members of the Council the various matters which they considered required attention and to explain their suggested remedies, a matter of great importance in such a wide district as ours where the members are naturally most conversant with the parts which they represent and not always very well acquainted in detail with the needs of the more distant parts.

The old Ashpits, Middens, and ash pit privies have all but been abolished throughout the district and have been chiefly replaced by ash closets, and to a less extent by water closets. In all newer buildings of a superior class, water closets are recommended but in smaller houses ash closets seem generally to be preferred, and as they are in strict accordance with the bye laws they cannot be prevented.

The conversion of 21 Ash pit privies has been postponed as the property of which they are part is being offered for sale, and they are of the least objectionable type.

Moreover the property will be sold on the clear understanding that such conversions will be enforced.

The Sanitary Inspector is to be congratulated on the successful accomplishment of this important work.

HOUSING:—Of all the questions which now concern us as a Sanitary Authority, the question of housing is by far the most important as it is unquestionably the most difficult. This is so, chiefly because all the other most essential questions of sanitation have been to a large extent satisfactorily solved, or are (only now in minor matters) in the way of being solved, such as water supply, drainage, removal of solid refuse, condition of main and other roadways, paving of streets and back streets, yards, footpaths, notification and isolation of infectious diseases, hospital isolation of such, disinfection of houses, clothing etc., and notification of births with machinery for the supervision of the management and especially the feeding of infants.

When to this we add the medical inspection of school children

with instruction as to how best to remedy defects found, it will be acknowledged that there is a very thorough and complete attempt to promote to its fullest extent the public health.

The great difficulties concerning housing lie in the inherited habits and customs of the bulk of the population, and in the colliery districts in the old established free house system, and I may add in the fact, of which otherwise we are proud, the high birth rate, which must in a district very largely working class and mining, and therefore a district of comparatively small houses tend to increase overcrowding.

In my opinion there is from year to year a great mitigation of overcrowding. I am far from saying that on the very excellent rule of considering all houses as overcrowded where there are more than two persons per room, there is no overcrowding, because I know very well that there is. I am, however, very certain that there are far fewer instances of gross overcrowding than there were even five or six years ago. This improvement, moreover, has not occurred either by lowering of the birth rate or decrease of population, but rather by manipulating the population so that the larger families are in the larger homes, and by the fact that the great majority of the new houses built have three, four or more rooms.

The increased surveillance of the Sanitary Authority has not been without its effect.

Both property owners and colliery owners have realised the necessity of being more careful in the allocation of tenants. The Sanitary Inspector is always on the alert to detect instances of gross overcrowding and to take action, but even he, with all his careful inspection, does not get as much knowledge, at least not as much vital knowledge as I get, not as Medical Officer of Health but as general medical practitioner, over the greater part of the district. That there are from time to time gross instances of overcrowding is certain, they are usually only detected by chance and are often due to families who have taken or got a house, taking in, not only single lodgers, but families, and this quite unknown to owners or sanitary officials until casually detected. My personal intimate knowledge in this way does not extend to Dunston, but

there is no justification for overcrowding there because building operations there are always in advance of demand for houses.

Excellent as in many ways the official definition of overcrowding is, it is certainly not universally reliable and I am equally certain that in many cases it acts injuriously. I could instance cases in which the air space is greater and the accommodation even, where adults of both sexes are not involved, better in two roomed than in three and four roomed houses, and many more cases where air space and accommodation to the extent of promoting cleanliness and comfort are greatly superior in two roomed houses than in those of three and four rooms. In many of the latter some of the rooms are ridiculously small and so situated as to be in the highest degree insanitary.

We have our bye-laws by which we are bound and must just make the best of them. Beyond these we may influence but cannot compel.

Within the limits so imposed I cannot see that we can do better than we do, though I admit that the housing conditions as they exist are far from an ideal though enormously better than they have been in the past.

During the year action has been taken in many instances and it has been in most cases effectual without going beyond notice by the Sanitary Inspector, or in default of this, by action taken by the Clerk at the instigation of the Council.

In only one instance have we had to appeal to the Magistrates when we got a closing order for a group of 5 houses at Dunston which was effective, and we got other two houses of a very bad character there permanently closed without an appeal.

The mere giving of figures as above is a very bald statement of work done in connection with housing, because in many instances the Sanitary Inspector by his tact and firmness has got far more important work done without even giving formal notice.

There have been many instances in which formal notices have been avoided by the Sanitary Inspector simply pointing out defects

and stating, generally after consultation with me, that unless they were remedied such formal notices followed by an appeal to the Magistrates would occur. The defects have been remedied and the property made sanitary.

Surely it is much better to get necessary work done in this way, though to the Council it is unseen and unknown, and consequently uncredited than to take the high handed method of appeal to the magistrates, or even to get the Council to take action through its clerk.

I think I am quite warranted in stating this fact, because all credit is due to the Sanitary Inspector alone, for whose vigilance and action, I have the greatest regard.

In reviewing the district, it is well to compare the work accomplished during the year with the suggestions given in last report as to the most important requirements, and to reiterate those still in abeyance.

I.—Whickham:—The completion of the Sewerage of Whaggs and Tethercock estates, and the making of the roads there were unquestionably the most important matters. The sewerage has been completed, and the work of roadmaking is proceeding. The whole of the Rectory and Whaggs lane has been excavated and levelled and the setting is all but completed. In a few months there will be an excellent roadway with one footpath for Rectory lane, and two footpaths for the whole extent of Whaggs lane. In Rectory lane the surface is to be ordinary macadam and in Whaggs lane tar macadam.

Presumably the making up of Millfield Road and Cornmoor road will follow.

All the requirements at Pit row have been completed in a most satisfactory manner, though the houses have been left as two roomed dwellings, the rooms however being large and airy. As most of the other colliery houses in Whickham have three or four rooms, these fit in fairly well with the requirements of the colliery. There is no necessity to overcrowd them, and there is now no gross over-

crowding.

The next most important part was Back row, to which I have referred in several previous reports. It has all been surveyed, and preparations were made for completing it, but except that a large yard common to several houses has been cemented, ashpits have been abolished, and well made ashclosets have been provided, nothing further has been done.

The reason for this delay is however a good one. The large new County school which is being built, is in close proximity. In connection with this a new wide roadway is to be made. This will be in communication with back row lane. It has been thought wiser to do the whole work at the same time. I have no doubt that it will be accomplished during the summer.

The other matters referred to in last report, the paving of Duckpool lane and Puddingpoke are insignificant in comparison to the others, but still they ought to be done, and the same is true of the space in front of Edith Cottages, preparations for the doing of which is now being made.

Rectory Cottages have been restored and occupied except one which was altogether removed to make a roadway to a new back street, beyond which there has been built a new row of six houses, all very satisfactory.

In last report I stated that the top row of the houses at Middletown, which had become considerably dilapidated, had been renovated by raising and renewing the roofs thus giving two large rooms to each house, and making the upper rooms large, airy and well lighted, and by provision of proper drainage, back streets, and conveniences with paving of yards etc. I acknowledged the very great improvement, but complained that the floors of the downstairs rooms had not been cemented, but had been left as badly flagged floors, and that fire places had not been placed in the upper rooms. I further urged the necessity of dealing similarly with the lower row and cross row, but that in addition the floors should be renewed, and fire places put in the upper rooms, and better staircases provided. Shortly afterwards the Cross row was completed, and when on

inspection, I found that this was not done, I protested, and the Surveyor, Sanitary Inspector and I met the agent for the owners with the result that we got the floors made satisfactory, and a promise that all these improvements should be completely carried out in the renovation of the lower row, with in addition, a necessary alteration in the position of the sky light in the upper rooms, so as to give more effective through ventilation.

The lower row has just been accomplished in this way, fire-places being also provided, and these are now very satisfactory as two roomed houses. The roadway in front of the cross row is now being improved as was much needed, and as was insisted on. I hope this also will be finished in a satisfactory manner.

II. SWALWELL. —Here the improvements which have been made though considerable and important are not commensurate to the needs. The great outstanding improvement is the almost complete conversion of the old ashpit privies to, in most cases, ash-closets and in a few, to waterclosets.

About one half of the Waterside has been greatly improved by a complete new system of drainage, by having all yards paved and by having cement footpaths made by and around all the houses there. This part includes a row of back to back houses of the least objectionable type, because the upper rooms are as good as the lower, are well lighted and have the nearest approach to through ventilation possible in these houses by having the staircases which are something rather better than the mere step ladders, at the far side and the upper rooms have fire places. All the improvements here recommended, or at least approved by Dr. Hill have been effected except the paving of the kitchen floors. To get the other most valuable improvements effected this was waived on the ground that the floors were in very good condition of their kind,—well laid even bricks—.

In this part of Swalwell it only remains to have the other half similarly dealt with, including Poor House Yard—new drainage cement yards and floors, and cement footpaths—. In this case,

however, I think the cement floors should be insisted on because the present brick floors are in very bad condition. The Council have, I believe, quite determined that all this must be done. There would then only remain the rectifying of the roadway itself, which is always in a deplorable condition. Where, however, the work recommended has been accomplished, this does not seem nearly as bad as it was, and I have no doubt, as the roadway appears to have a good bottom, a few loads of good stones rolled in would accomplish all that is necessary.

I am sanguine enough to believe that during the coming summer all this will be satisfactorily accomplished and then the very worst part of Swalwell, for its size and extent, will be quite transformed and made altogether respectable if the inhabitants will only live up to the improvements.

I have already referred to the great improvement effected by the new sewerage of back Quality row and Dark entry. It only remains here to complete the improvements by cementing of yards, and making up, and paving of back streets and roadways, and this applies to the whole of this extreme west end of Swalwell. Practically nothing of this as detailed in last report has been accomplished though it has been thoroughly gone into, examined and discussed by the Council on the spot, and generally approved. I can only again urge its importance, and even the necessity of its early accomplishment.

I hope that the greatly improved mortality statistics of Swalwell as shown in this report, an index as it is of the greatly improved health of the inhabitants will not encourage delay, but will rather act as an incentive to push on the improvements, inasmuch, as it shows how favourably the improvements already effected, have influenced the public health.

The necessary improvements of Brewery Bank have not yet been effected. Negotiations here have been prolonged and wearisome but I understand a solution is in sight, and in all probability everything required will be accomplished during the year.

Axwell Terrace so far as built is being greatly improved by the extension of the gardens in front, it is being developed on the avenue system.

Altogether, though still far short of its requirements, the improvements effected in Swalwell during the year have been very considerable.

III. MARLEY HILL:—The Valley has had its sewerage connected up with the Whaggs, Sunnyside and Marley Hill system, and has had its large ashpit privies converted to ashclosets.

The large County School has similarly been connected up and by the abolition of the cesspool, the great nuisance of the overflow polluting the roadway in front of Church Street has been abolished.

Several of the back to back houses in Post Office Row have been demolished and in their place have been built large well constructed houses with every convenience, and with gardens in front, others have been dismantled as a preliminary to rebuilding on a superior plan, and only two or three remain occupied and these will later on be similarly dealt with, so that in a very short time this row of back to back houses will have disappeared as such and an excellent row of houses will have taken their place. In the meantime twelve new houses have been built parallel to Church Street and Cuthbert Street, which have more than given accommodation to the displaced tenants. It is to be expected that in due course others will follow.

No other changes have been effected at the Hill itself, the roads or streets have not been made up as anticipated and arranged for. There is, however, a good reason for this. inasmuch as the drainage system has not yet been carried to the Hill, and it would obviously be absurd to make up the streets and roads until this is accomplished. It is thus the Council which has been dilatory rather than the Colliery owners. The roads moreover have been kept in better condition.

The immediate extension of the Sewerage system is a matter of great importance, both for its own sake and also in order to enable the street making to be proceeded with.

It is with the utmost regret that I have still to state that though the back to back houses in Cinder burner's row were converted into through houses some years ago, the upper rooms have not been made through and through.

It would be such a simple matter to effect this and such a great improvement if it were effected with the construction of one proper staircase instead of the still remaining two step ladder entrances to the upper rooms, that it is difficult to understand why the work is not done.

These houses cannot be regarded as having real through ventilation until this is done.

Another very important question has arisen in connection with all these houses on the Hill, especially those in immediate proximity to the new works erected.

Many complaints have been made as to the irritating effects of the smoke, gases and fumes given off at these works. It is a question as to how far these are going to affect the health and comfort of the dwellers in the immediate vicinity. Before great alterations are made in these houses, it is important that some enquiry should be made as to the effect of these.

At the High Row the roads have been improved, all yards have been cemented, footpaths properly kerbed have been made throughout, and on one side these have been cemented, and on the other this has only presumably been deferred until winter is passed.

Otherwise one half of High row still remains back to back, as well as two other rows on the Hill, and a row at Crookgate.

In spite of all that has been said, it remains a fact that year by year the mortality statistics for the whole Marley Hill district are always extremely favourable. It generally runs Whickham close

for the most favourable position, and is always superior to it in the mortality from Tuberculous diseases. This is especially remarkable considering that for several years it has shown the greatest incidence of notifiable infectious diseases especially Diphtheria though not a greater mortality from these diseases.

IV. DUNSTON.—The striking feature of Dunston is its phenomenally rapid extension. New works of an important character are being established there, which are causing a constant and rapid increase of population. Not only new houses but new streets are being constantly built, and this is encouraged by its proximity to Elswick across the river and to Gateshead.

All such new houses and streets must be built according to the bye laws and they are consequently of a very satisfactory character. In proportion to these the very old Dunston is quite insignificant.

In this part however, during the year we have been obliged to compulsorily close seven houses.

Others of a poor type will disappear to make way for a public building. The few other houses of the very old Dunston are rather in the position of being derelict houses for derelict people. Many of the houses of an intermediate state are not very satisfactory but not condemnable.

It is in these that overcrowding is liable to occur, though apart from the desire to get cheap accommodation, there is no excuse for overcrowding, not only because of the constant erection of new houses but because there are always plenty of empty houses chiefly of the cheapest class.

Always following closely, but not too closely, the building of new houses is the making up and paving of the streets,

Necessarily arising from this rapid increase of the population is the widening of some of the main streets which has been accomplished during the year.

When one knows of so many matters calling for attention, one is apt to consider that the accomplishment of reforms is slow, but it seems to me that a careful consideration of the facts of improvements accomplished during the year, as recorded in this report, must be reassuring, as the sum total is by no means inconsiderable, especially when we consider the amount of energy expended in keeping accomplished results up to a proper standard of efficiency. The more there is accomplished the more supervision is required.

I have much pleasure in appending the tabular report of Mr. Dinsdale, the Sanitary Inspector, and in directing attention to it as a record of an immense amount of most valuable sanitary work, though it is impossible to express adequately in this bald form the extent of his work in the interests of the public health.

The Whickham Urban District is an extensive one and the population has become very large and is of a very varied character. That Mr. Dinsdale is able to do the work of sanitary inspection so thoroughly is only due to the fact, apart from his own energy and enthusiasm, that the district has actually grown under his inspection and that he actually knows most intimately every hole and corner of the district. Moreover, he has a most wonderful knowledge of the characters of most of the people connected with the older properties, with which we have so often to deal, in intricate cases is able to ferret out the people actually responsible and deal with them according to their characters and dispositions, using always the most consummate tact. Personally I do not know how I would get on without him, but then I alone come into such intimate contact with him as to know his value.

Appended also are the Statistical Tables as required by the Local Government Board,

I am,
 MR. CHAIRMAN AND GENTLEMEN,
 Your obedient servant,
 ANDREW SMITH,
 MEDICAL OFFICER OF HEALTH.

TABLES.

County of Durham.

SUMMARY of Work done in the Inspector of Nuisances' Department during the year 1908 in the URBAN DISTRICT of WHICKHAM.

1. PUBLIC HEALTH ACTS.				Number of Informal written notices by Inspector	Number of Formal Notices by order of Authority	Number of Nuisances abated after Notice	General Remarks
Dwelling-house and Schools.	Foul Conditions	Structural Defects	Overcrowding ...		124 56 7	124 56 7	
Lodging-houses	...	...	...	3	nil	nil	
Dairies and Milkshops	...	...	...		nil	nil	
Cowsheds	...	...	...		1	4	
Bakehouses	...	...	...		nil	nil	
Slaughter-houses	...	...	...	
Ashpits and Privies	...	...	...		30	35	* Including 26 left over last year with 21 in hand to do, which will complete the whole of the privy middens in the District.
Deposits of Refuse and Manure	...	...	...		60	60	
Waterclosets...	...	...	...		3	3	
Defective Yard Paving	...	...	...		11	11	
House	Defective Traps	...	...		nil	nil	
	No Disconnection from	sewers			nil	nil	
Drainage	Other Faults				160	160	Including branch drains on the Whaggs and Tethercock Estates.
Water Supply	...	...	...		nil	nil	
Pigsties	...	...	...		1	1	
Poultry Kept					6	6	
Offensive Trades	...	...	...		nil	nil	
Smoke Nuisances	...	...	...		nil	nil	
Other Nuisances	Whitewashing				565	565	Whitewashing passages, etc., staircases, and all out-houses with hot lime
TOTALS ...				3	1024	1032	

Inspector's Report continued:-

	Number	Remarks.
II. HOUSING OF THE WORKING CLASSES ACT 1890.		
Formal Notices served ...	4	
Dwellings dealt with ...	8	
Dwellings made habitable after formal notice	1	
Closing Orders applied for	5	
Closing Order granted by Magistrates	5	
Dwellings permanently closed ...	7	
III.		
Number of New Houses erected during the year ...	149	
Number of such houses occupied during the year. ...	108	
IV. WATER, FOOD AND DRUGS		
Samples of Water taken for analysis	nil	
„ „ condemned as unfit for use ...		
Seizures of Unwholesome Food ...		
Convictions for exposing or selling Unwholesome Food ...		
Samples of Food and Drugs taken for Analysis ...		
„ „ found Adulterated ...		
V. PRECAUTIONS AGAINST INFECTIOUS DISEASE		
Lots of Infectious Bedding stoved or destroyed	89	
Houses disinfected after Infectious Disease	70	
Schools do. do.		
Prosecutions for exposure of infected persons or things		
Convictions for do. do do.		

*Jan. 19th 1909.*JOHN DINSDALE,
Inspector of Nuisances

Annual Report of the Medical Officer of Health

For the year 1908, for the URBAN DISTRICT of WHICKHAM, on the administration of the Factory and Workshop Act, 1901, in connection with
FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES AND HOMEWORK.

1.—INSPECTION.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTOR OR INSPECTORS OF NUISANCES.

Premises.	Number of		
	Inspections.	Written Notice,	Prosecutions.
Factories (including Factory Laundries).	Two	None.	None.
Workshops (including Workshop Laundries).	Two Two.	None. None.	None. None.
Workplaces (Other than Outworkers' premises included in Part 3 of this report.			
Total			

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Pro- secutions.
	Found,	Remedied	Referred to H M. Inspector,	
<i>Nuisances under the Public Health Acts:.</i>				
Want of cleanliness	None		None	None
Want of Ventilation	—		—	—
Overcrowding	—		—	—
Want of drainage of floors	—		—	—
Other nuisances	—		—	—
Sanitary accomodation	sufficient and separate for sexes.	insufficient ...		
Act has been adopted		unsuitable or defective		
No standard fixed		not separate for sexes	—	—
<i>Offences under the Factory & Workshop Act:</i>				
Illegal occupation of underground bakehouse (s.101)	—		—	—
Breach of special sanitary requirements for Bakehouses (ss. 97 to 100).	—		—	—
Failure as regards lists of outworkers (s. 107).	—		—	—
Other offences	—		—	—
(Excludi c ed in part 3 of this report.)				
Total				

Annual Report continued:-

3. OTHER MATTERS.

Class.	Number.
Matters notified to H.M. Inspectors of Factories:—	None.
Failure to affix Abstract of the Factory and Workshop Act (s. 133)	None
Action taken in matters referred by { H.M. Inspectors as remediable under the Public Health Acts but not { under the Factory Act (s. 5) {	Notified by H.M. Inspectors None Reports (of action taken) sent to H.M. Inspectors. None
Other	None
Underground Bakehouses (s. 101) There are none... ..	
Certificates granted during the year	
In use at the end of the year	
Home work:—	Number of
<i>Lists of Outworkers</i> (s. 107)	
Lists received... ..	Lists. Outworkers.
Addresses of outworkers { forwarded to other Authorities .. received from other Authorities ...	None None
<i>Homework in unwholesome or infected premises:—</i>	
Notices prohibiting homework in unwholesome premises (s. 108)	Wearing Apparel Others
Cases of infectious disease notified in homeworkers' premises ...	None None
Orders prohibiting homework in infected premises (s. 110) ...	None None
Workshops on the Register (s. 131) at end of the year	None None
	Number, (2)
M. A. Tait, 1, Ravensworth Road, Dunston. Millinery.	
Exs of Isaac Bewley, Clock Mill yard, „, Artificial stone.	
Mary Gallon, 5, Ravensworth Road, Dunston, Dress Maker.	} Millinery 1
Emily Allison, Front Street Whickham, Dressmaking.	
C, Williamson, 111, Ravensworth Road, Dunston, Laundry.	Dressmaking 2
John Robinson, 8, Ellison Road Dunston Stocking Knitting.	Boots 5
William Laws, Ellison Road, Dunston, Baker.	Bakers 3
Stephenson & Mallam 2 & 4 Ravensworth Rd. Dunston Baker.	} Artificial Stone 1
Thomas Handy 238 Ravensworth Road Dunston Baker,	
William Watts 153 Ravensworth Road Dunston Boots.	Stocking Knitting 1
Thomas Surtees 125 Ravensworth Rd. Dunston Boots,	} Laundry 1
Lawrence Lockwood 7, Davison Place Dunston Boots.	
Edward Billiary, Front Street, Whickham, Boots.	
Co-operative Society, Market Lane, Swalwell, Boots.	
Total number of workshops on Register 14	Total 14

January, 1908

ANDREW SMITH,
Medical Officer of Health.

Vital Statistics for the Whole District during 1908 and Previous Years.

YEAR.	Popu- lation estimated to middle of each Year	BIRTHS.		TOTAL DEATHS REGISTERED IN THE DISTRICT				TOTAL DEATHS IN PUBLIC INSTITU- TIONS IN THE DISTRICT	Deaths of Non- residents registered in Public Institu- tions in the District.	Deaths of Residents registered in Public Institu- tions beyond the District	Nett DEATHS AT ALL AGES BELONGING TO THE DISTRICT.	
		Number	Rate	Under 1 Year of age		At all Ages					number	Rate
				Number	Rate per 1,000 Births registered	Number	Rate					
1	2	3	4	5	6	7	8	9	10	11	12	13
1898	10150	351	35.1	71	169	209	20.5			7	216	21.3
1899	10300	416	40.3	78	176	204	19.6			2	206	20.0
1900	10440	446	42.1	73	163	232	22.2			2	234	22.4
1901	12852	524	40.0	137	261	318	24.7			2	320	24.8
1902	13752	520	37.8	68	130	204	14.8			8	212	15.4
1903	13808	527	38.1	87	165	253	18.3			8	261	18.9
1904	14255	523	36.6	101	193	252	17.6			6	258	18.0
1905	14717	510	34.6	62	121	183	12.4			5	188	12.7
1906	15194	542	35.6	87	160	237	15.5			9	246	16.1
1907	15686	570	36.3	79	138	264	16.8			12	276	17.5
Aver- ages for years 1898. 1907.	13115	492	37.6	84	167	235	18.2			6	241	18.7
1908	16195	580	35.8	74	127	224	13.8	-	-	14	238	14.6

NOTE.—The deaths to be included in column 7 of this Table are the whole of those registered during the year as having actually occurred within the district or division. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institu-
ons elsewhere.

Area of District in acres (exclusive of
area covered by water)—5,914

Total population at all ages.....12,852
Number of inhabited houses.....2,574
Average number of persons per house 4.99
At
Census of
1901

Table I continued
Vital Statistics of whole District continued.

I. Institutions within the District receiving sick and infirm per- sons from outside the District	II. Institutions outside the District receiving sick and infirm per- sons from the District	III. Other Institutions, the deaths in which have been distributed among the several localities in the District
None	Gateshead Union Workhouse County Asylum.	

Is the Union Workhouse within the District? No.

Cases of Infectious Disease Notified during the Year 1908

TABLE III

Notifiable Disease.	Cases Notified in the Whole District.						Total Cases Notified in each Locality-				No. of Cases re-moved to Hospital from each Locality				Total cases re-moved to Hospital	
	At all Ages.	At Ages.—Years.					Whickham	Swalwell	Marley Hill.	Dunston	Whickham.	Swalwell	Marley Hill	Dunston		
		Under 1.	1 to 5.	5 to 15	15 to 25	25 to 65										65 and upwds
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous croup)	44	...	11	28	5	...	3	4	20	17	...	1	1	7	...	9
Erysipelas	11	...	...	...	2	9	1	4	3	3	...	...	...	...	...	...
Scarlet fever	40	...	15	23	1	1	10	5	5	20	7	3	...	4	...	14
Typhus fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric fever	2	...	...	...	...	2	...	1	...	1	...	1	...	...	...	2
Relapsing fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal fever	2	...	...	...	1	1	1	1	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	99	26	51	9	13	...	15	15	28	41	7	5	1	12	...	25

ISOLATION HOSPITAL:—Blaydon, Whickham, Ryton Conjoint Hospital, Norman's Riding, in Blaydon Urban District
Total available beds, 41. Number of Diseases that can be concurrently treated 3, and similar Conjoint Smallpox
Hospital at Sealburn in Ryton Urban District 12 beds.

TABLE IV.

Causes of, and Ages at, Death during Year 1908.

Causes of Death.	Deaths in or belonging to whole District at subjoined Ages.							Deaths in or belonging to Localities (at all ages)			
	All ages	Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Whickham	Swalwell	Marley Hill	Dunston
Small-pox											
Measles... ..	1	1	...		...	...	...	...	...	...	1
Scarlet fever											
Whooping-cough	12	5	7		...	...	...	2	6	1	3
Diphtheria and Membranous Croup	2	...	2		...	...	...	...	...		2
Croup											
Fever { Typhus... ..	1	...	...	...		1	...	...	1	...	
Enteric... ..											
Other Continued											
Epidemic Influenza	1	...	...	...	...	1	...	...		...	1
Cholera											
Plague											
Diarrhœa... ..	16	15	1	...	...	...	...	1	3	2	10
Enteritis											
Puerperal Fever... ..	2				1	1		1	1		
Erysipelas											
Other Septic Diseases											
Phthisis (Pulmonary Tuberculosis	19	...	...	1	2	14	2	4	2	1	12
Other Tubercular Diseases	11	3	6	2		...	...	1	5		5
Cancer, Malignant Disease	8	...	...	...	...	7	1	1	1		6
Bronchitis	31	13	4	...	1	6	7	8	5	1	17
Pneumonia	11	2	1	...	1	7			2	1	8
Pleurisy											
Other Diseases of Respiratory Organs...	5	1		...	...	2	2	1	3	...	1
Alcoholism											
Cirrhosis of Liver }	1	...	...	...	...	1	...	...	1	...	...
Venereal Diseases	2	2							1	1	
Premature Birth	11	11	...	...	...	...	...		4	2	5
Diseases and Accidents of											
Parturition	7				2	5			2		5
Heart Diseases	18	...	...	1	1	8	8	3	6	3	6
Accidents... ..	7	...	2	1	...	4	...	3	1	...	3
Suicides	1	...	...	...	...	1		1		...	
All other causes	71	21	11	1	3	16	19	9	15	7	40
All causes... ..	238	74	34	6	11	74	39	35	59	19	125

